

CLAIMS

1. A method for packaging flat objects (4), the method comprising the steps of:

Continuously forming a quasi-endless web of a packaging material (7) into a string of bags (7') being open on three sides and closed on one side and conveying the string of bags in a conveying direction,
during conveyance, charging the bags (7') with at least one flat object (4) each,
severing the bags (7') from the string of bags, and
sealing the bags (7') by seams corresponding to the open bag sides,
wherein, during all method steps, an open side of the bags opposite to the one closed side and a corresponding seam keep a position which is independent of the format of the object to be packaged (4), and
wherein, in the step of forming the string of bags, a depth of the bags (7') and/or, in the step of sealing the bags, a distance between two seams corresponding to lateral open sides of the bag are adjusted to the format of the object to be packaged (4), or to the width of the packaging material respectively.
2. The method according to claim 1, wherein the bags (7') are charged from above through the one open side opposite the one closed side and are secured in the area of said open side from before the steps of charging and severing to the step of sealing.
3. The method according to claim 1, wherein the bags (7') are sealed being positioned in conveying compartments (3) rotating in conveying direction, wherein the bags (7') are formed in the conveying compartments (3), or are supplied to the conveying compartments, and wherein the bags are charged with the objects to be packaged (4) in the conveying compartments (3) or before the bags are supplied to the conveying compartments (3).
4. The method according to claim 3, wherein the packaging material (7) to be formed into a string of bags is drawn into the rotating conveying compartments

(3) by a plurality of drawing-in members (8.2), and wherein, in the conveying compartment (3), each fully formed bag (7') is secured in the region of its open side opposite its one closed side, and wherein the drawing-in member (8.2) is then withdrawn from the bag, wherein the length of the drawing-in member (8.2) determines the depth of the bag (7').

5. The method according to claim 3, wherein the string of bags is formed from the packaging material (7) by guides (8.7, 8.8) acting alternately from either side of the packaging material, which guides (8.7, 8.8) are driven to move in the conveying direction and to be distanced relative to each other transverse to the conveying direction at a measure adjusted to the depth of the bags to be formed, and wherein the bags (7') are secured to alternate guides (8.7), are then charged with objects (4) and are then, for being sealed, positioned in rotating conveying compartments (3).

6. The method according to claim 1, wherein the packaging material (7) is a weldable plastic foil or sheet material and wherein sealing of the bags is effected by welding.

7. A device for packaging flat objects (4) using a packaging material (7) in the shape of a quasi-endless web, the device comprising:
means (5, 9) for supplying objects to be packaged (4) and for removing packaged objects (4'),
a means (6) for supplying the packaging material (7),
a means for forming, from the packaging material (7), a string of bags (7') being open on three sides and closed on one side,
a means for conveying the bags (7') in a conveying direction,
a means for severing the bags (7') from the string of bags, and
a means for sealing the open sides of the bags (7') by producing appropriate seams,
wherein the means for forming the bags (7') and the means for conveying the bags (7') are arranged in such a way that the open side opposite the one closed

side of the bags and the corresponding seam keep an unchanged position independent of the format of the object to be packaged (4), and

wherein the means for forming the string of bags (7') is adjustable for adjusting a depth of the bags and/or the means for sealing the bags (7') is adjustable for adjusting the distance between two lateral seams.

8. The device according to claim 7, wherein the means for conveying the bags (7') is designed and arranged in such a manner that, at least at a point of supply of the objects to be packaged (4), the bags (7') are positioned with their open side opposite the one closed side facing upwards, and wherein the conveying means is equipped with securing elements (22, 27) being equipped for securing the bags (7') in the region of said open side.
9. The device according to claim 7, wherein the means for forming the string of bags (7') comprises drawing-in members (8.2) of an adjustable length and co-operating with distal ends of rotating compartment elements (2), and wherein the securing elements (22) are arranged in conveying compartments (3) formed by the compartment elements (2)..
10. The device according to claim 9, wherein the distal ends of the rotating compartment elements (2) and of the drawing-in members (2.1) comprise freely rotating rollers (2.1).
11. The device according to claims 7, wherein the means for forming the string of bags (7') comprises circulating guides (8.7, 8.8), wherein the guides are equipped for alternately acting from two opposing sides of the packaging material (7) and to be displaced relative to each other and transversely to a circulation direction, and wherein each alternate guide (8.7) is equipped with securing elements (27).
12. The device according to claim 11, wherein a circulation path of the guides (8.7) is aligned with a rotation path of the conveying compartments (3) such that the

guides (8.7) are conveyed along a part of their path in the region of the distal ends of the compartment elements (2) which form the conveying compartments (3).

13. The device according to claim 7, wherein the rotating conveying compartments (3) are equipped with sealing elements (21.1, 21.2) which are moveable against each other in a controlled manner, wherein the sealing elements (21.1, 21.2) are equipped to produce three seams corresponding with the open sides of the bags, and wherein at least some of the sealing elements (21.1, 21.2) of each conveying compartment are simultaneously adjustable to various distances between lateral seams.
14. The device according to claim 13, wherein the conveying compartments (3) are positioned in a drum (1) rotating around a drum axis (A).
15. The device according to claim 14, wherein the drum (1) comprises a centrally arranged adjustment device (41) equipped for simultaneous adjustment of the sealing elements (21.1, 21.2) of all the conveying compartments (3).
16. The device according to claim 14, wherein the means (5) for supplying the objects (4) is arranged in the region of an upper zenith of the drum (1), the means for supplying the packaging material (7) or the string of bags immediately upstream of the means (5) for supplying the objects (4), and the means (9) for discharging the packaged objects (4') are arranged in a lower region of the drum (1).